

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
22 January 2004 (22.01.2004)

PCT

(10) International Publication Number
WO 2004/008533 A1

(51) International Patent Classification⁷: **H01L 27/00**,
51/20

(21) International Application Number:
PCT/IB2003/003029

(22) International Filing Date: 8 July 2003 (08.07.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
102 32 238.4 17 July 2002 (17.07.2002) DE

(71) Applicant (for DE only): **PHILIPS INTELLECTUAL
PROPERTY & STANDARDS GMBH** [DE/DE]; Stein-
damm 94, 20099 Hamburg (DE).

(71) Applicant (for all designated States except DE, US):
KONINKLIJKE PHILIPS ELECTRONICS N.V.
[NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven
(NL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **BECHTEL**,
Helmut [DE/DE]; c/o Philips Intellectual Property &
Standards GmbH, Weissshausstr. 2, 52066 Aachen (DE).
BERTRAM, Dietrich [DE/DE]; c/o Philips Intellectual

Property & Standards GmbH, Weissshausstr. 2, 52066
Aachen (DE). **GLÄSER, Harald** [DE/DE]; c/o Philips
Intellectual Property & Standards GmbH, Weissshausstr. 2,
52066 Aachen (DE).

(74) Agent: **VOLMER, Georg**; Philips Intellectual Property &
Standards GmbH, Weissshausstr. 2, 52066 Aachen (DE).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC,
SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

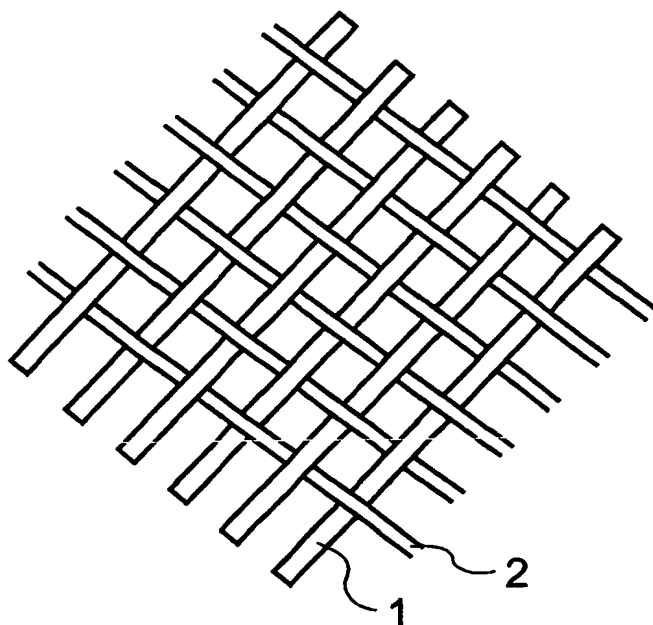
(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments

[Continued on next page]

(54) Title: ELECTROLUMINESCENT DEVICES COMPRISING TWO-DIMENSIONAL ARRAY



(57) Abstract: The invention relates to an
electroluminescent device, which comprises
a first set of bands and a second set of bands,
which are arranged in such a way, that they
form a two-dimensional mesh with points of
intersection between the bands of the first set
and the bands of the second set. The bands in
each case consist of a sequence of layers and at
least one set of bands contains a light-emitting
substance, which emits light when a voltage
is applied. The band structure increases the
contact areas between the individual bands
and the light is generated more efficiently.



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.